

Claims

1. A heat conducting sample block comprising a top plate and a base plate, each having upper and lower faces; the upper face of the top plate having a recess therein, said recess having an opening for accepting a sample or sample vessel, and the lower face of the top plate having a projection extending towards and fixedly engaged with a notch on the upper face of the base plate.

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2. The heat conducting sample block of claim 1, wherein said base plate is comprised of multiple layers, whereby said multiple layers are configured to provide said notch.

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3. The heat conducting sample block of claim 2, wherein said notch is undercut.

4. The heat conducting sample block of claim 1, 2, or 3, wherein said notch has an interior volume surrounding said projection, and said interior volume contains a material having a heat capacity lower than the heat capacity of the base plate.

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5. The heat conducting sample block of claim 1, 2, or 3, wherein the block comprises at least two recesses and at least two notches, whereby x-y registration of the top plate and the base plate is achieved.

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6. The heat conducting sample block of claim 1, wherein at least one of said top plate or said base plate is comprised of silver, silver alloy, or silver composites.

5    7. The heat conducting sample block of claim 1, wherein said base plate further comprises a mechanical fastener on its lower face.

10    8. A heat conducting sample block comprising a top plate and a base plate, wherein said base plate is a composite made up of a graphite fiber weave and an encapsulant.